

## ABSTRACT OF THE DISCLOSURE

[0050] Presented herein is a video decoder for supporting both single and four motion vector macroblocks. In one embodiment, the video decoder comprises a processor, a motion vector address computer, a video request manager, and a pixel reconstructor. The processor decodes a set of parameters. The set of parameters comprises motion vectors indicating reference pixels associated with the macroblock. The motion vector address computer calculates addresses associated with motion vectors. The video request manager fetches a block of reference pixels at the addresses calculated by the motion vector address computer. The pixel reconstructor reconstructs pixels from the macroblocks. The pixel reconstructor is operable to reconstruct pixels from macroblocks encoded in accordance with a plurality of standards.